

**Work engagement as a mediator in the relationship between HRM-practices  
and Employee Performance**

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### **Abstract**

This study aimed to investigate the role of work engagement in the relationship between ability-enhancing Human Resource Management (HRM) practices and employee performance. Questionnaires were distributed in 52 organisations where 665 employees and 52 organisational representatives participated. Employees were asked about their level of work engagement and performance. Organisational representatives gave information about the use of HRM practices in their organisation, including the ability-enhancing practices of training and selection. Multilevel analysis did not find a direct relationship between ability-enhancing HRM practices and employee performance. Support was, however, found for work engagement as a mediator in the relationship between HRM practices and employee performance. This suggests that selection and training procedures impact performance indirectly through work engagement. The implications for practice are discussed, and it is argued that organisations could benefit from evaluating the content and procedures of selection and training practices.

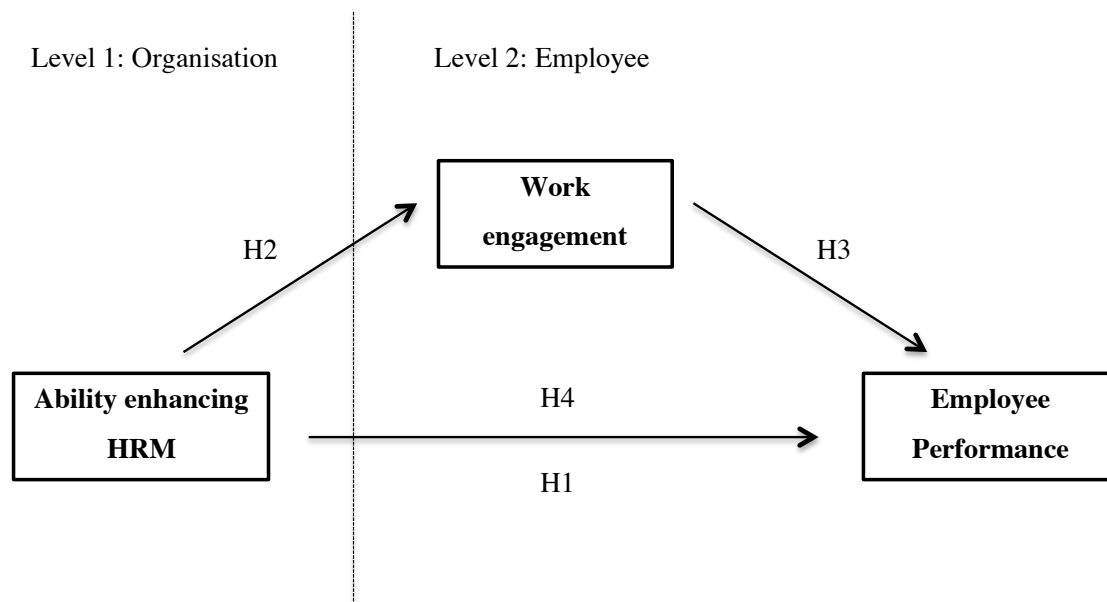
## **Introduction**

The development of Human Resource Management (HRM) as an academic and operational discipline rests upon the assumption that performance can be improved by effectively managing human resources. Large amounts of research have been dedicated to investigating the links between HRM and organisational and employee outcomes, and several authors have suggested that HRM positively impacts a range of organisational outcomes (e.g., Appelbaum, Bailey & Kalleberg, 2000; Gould-Williams, 2003; Huselid, Jackson, & Schuler, 1997; Wright, Gardner, & Moynihan, 2003). Although studies have shown support for the impact of HRM on organisational performance, critics argue that these studies suffer from methodological limitations (Wall & Wood, 2005) and that there is insufficient evidence for these claims (Boselie, Dietz, & Boon, 2005; Purcell, 1999). Furthermore, it has been pointed out that although a large volume of empirical research does link HRM practices to organisational performance, it is unclear exactly what this link is (Fleetwood & Hesketh, 2006). Researchers are calling for a clarification regarding the intermediate variables still unaccounted for – often referred to as the ‘black box’ (Boselie et al., 2005). Organisational performance as an outcome variable has been claimed to be too distant from the HRM practices suggested to affect it, and it has been recommended that the emphasis should instead be on the intermediate employee outcomes (Dyer & Reeves, 1995). In response to these concerns, studies have been conducted that link HRM practices to employee outcomes such as motivation and performance measures (e.g., Chang, 2006; Gardner, Moynihan, Park, & Wright, 2001; Huselid, 1995; Lee & Bruvold, 2003; Tremblay, Cloutier, Simard, Chenevert, & Vandenberghe 2010). Adding to this research, the present study investigates the relationship between HRM practices and employee performance.

HRM can include a number of practices, which have been categorized in terms of improving ability, motivation or opportunity (Boxall & Purcell, 2003). The focus of this investigation is on the ability-enhancing dimension, specifically development and selection, which are suggested to impact performance on the employee level. The way in which these HRM practices impact performance is also subject to questioning. Whether HRM practices are affecting employee performance directly, or if they are operating through other mechanisms, which in turn influence performance, has been a topic of interest. For instance, Tessema and Soeters (2006) investigated the possible mediation of HRM outcomes like motivation, role clarity and retention.

Moreover, Karatepe (2013) recently suggested the HRM – employee performance link to be mediated by work engagement, which involves positive emotions of vigour, dedication and absorption in one’s work tasks (Schaufeli, Salanova, Gonz  les-Rom  , & Bakker, 2002). While Karatepe’s (2013) study investigated the HRM practices of training, empowerment and rewards, the current emphasis is on the ability-enhancing practices of training and selection. Still, Cropanzano and Mitchell (2005) suggest that the presence of ability-enhancing practices can send powerful signals of investment and commitment to the employee, which opens up for social exchange relationships that foster positive job and organisational outcomes. Employees at the receiving end of ability-enhancing practices might then reciprocate by increased work engagement (Karatepe, 2011, 2013). The present study will investigate these assertions by suggesting work engagement as a mediator in the relationship between HRM practices and employee performance.

Figure 1. Model of the Hypothesised Mediation. Ability-Enhancing HRM Practices Affect Employee Performance Through Work Engagement.



This study contributes to the existing knowledge by using data on several levels (see Figure 1). The present investigation is a multilevel one: data from both the unit level (organisational representative) and the employee level was collected. This reduces common method bias and increases the statistical power and generalizability (Podsakoff et al., 2012). By investigating the role of work engagement in the relationship between ability-enhancing HRM practices and employee performance, this paper also responds to a research call for a clarification of intermediate variables in the HRM – organisational performance link (Boselie et al., 2005; Gardner et al., 2001).

### **HRM Practices and Performance**

Recognising human resources as a possible source of competitive advantage in a fast paced, rapidly evolving labour market has resulted in a growing body of literature seeking to illuminate the HRM – performance link. In a broad sense, strategic Human Resource Management can be defined as “the pattern of planned human resource deployments and activities intended to enable an organisation to achieve its goals” (Wright & McMahan, 1992, p. 298). HRM practices aim at increasing employees’ skills, commitment, empowerment, motivation, and productivity (Kuvaas, 2008). Studies on performance predictors have to a large degree investigated the impact of systems or practices on *firm* performance and outcomes such as market value, productivity and efficiency (e.g., Appelbaum et al., 2000; Becker & Huselid, 1998; Delaney & Huselid, 1996; Guest, 2002; Guest, Michie, Conway, & Sheehan, 2003; Huselid, 1995; Park, Mitsuhashi, Fey, & Bjorkman, 2003; Wright et al., 2003). Traditionally, fewer studies have set out to investigate the more proximal *employee* outcomes of HRM. Some authors have questioned this frequently researched direct link between HRM and firm performance, and the tendency to ignore the intermediate employee outcomes and behaviours (e.g., Gardner et al., 2001). In their review of human resource strategies and firm performance, Dyer and Reeves (1995) suggest that strategic HR-efforts will have their most direct effect on more proximal human resource outcomes, with organisational and financial outcomes only subsequently being affected. They categorize performance outcomes into: (1) human resource outcomes, such as individual performance and turnover; (2) organisational outcomes, such as productivity and service; and (3) financial outcomes, for example, return on investments. The dominant focus on the latter, they argue, could be a consequence of the need to satisfy heavy interests in the bottom-

line financial outcomes (Dyer & Reeves, 1995). Accordingly, there has been a call for studies examining the causal chain between HRM practices and the ultimate outcome of firm performance (Boselie et al., 2005; Gardner et al., 2001). For instance, more than a decade ago Rogers and Wright (1998) discussed the lack of studies examining *how* HRM practices might impact firm performance. Later, Wright and Boswell (2002, p. 262.) argued that “the dearth of research aimed at understanding how multiple (or systems of) HR practices impact individuals certainly suggests a ripe of opportunity for future research”. Since then, several researchers have taken this opportunity to investigate employee outcomes of HRM practices (e.g., Boon, Den Hartog, Boselie, & Paauwe, 2011; Gardner et al., 2001; Gould-Williams & Davies, 2005; Harley, 2002; Lee & Bruvold, 2003), including employee performance (e.g., Aryee, Walumbwa, Seidu, & Otaye, 2012, 2013; Chang & Chen, 2011; Kehoe & Wright, 2013; Tessema & Soeters, 2006; Tremblay et al., 2010). As Aryee et al. (2013) state, it is not the organisation that performs, but the individuals in it. Firms rely on HRM practices in order to influence employee behaviours, ultimately to gain more beneficial outcomes (Chang & Chen, 2011). The present paper thus investigate HRM practices’ impact on employee performance, as part of a chain of relationship ultimately intended to benefit the organisation.

Studies investigating employee performance made a distinction between in-role and extra-role performance. Extra-role performance refers to performance that exceeds formal requirements, whereas in-role performance refers to what is explicitly required (Bakker & Bal, 2010). More specifically, in-role performance, as measured in the present study, relates to the degree of effort the employee invests in his or her job, and how the employee rates the quality of that work, according to formal requirements (Snape & Redman, 2010; Williams & Anderson, 1991).

Studies on HRM have used various conceptualisations, differing in types of bundles or practices they investigate. In fact, an upheld critique of work within HRM is the lack of consensus regarding the practices involved. Reviewing HRM and performance research, Boselie et al. (2005) mostly found HRM understood vaguely as “a set of employee management activities”. One line of research has investigated the effects of what is referred to as High Performance Work Systems (HPWS), which consist of a range of practices, selection and training included. Aryee et al. (2012) found that employee perceptions of HPWS significantly relate to individual performance ratings by supervisors in two bank branches. They also found that



manager rated HPWS are positively associated with supervisor rated service quality (Aryee et al., 2013). Similarly, Liao, Toya, Lepak, and Hong (2009) found that employee perceptions of HPWS significantly predicted individual general service performance and knowledge-intensive service performance in bank employees. Additionally, Chang and Chen (2011) reported a relationship between unit level HPWS and employee job performance, which was mediated by employee affective commitment. Similar to HPWS, High Performance Work *Practices*, including training, empowerment and rewards, have also been found relating to employee performance (Karatepe, 2013). These studies indicate beneficial effects of several HRM practices on employee performance.

Other researchers have used a model of ability, motivation and opportunity (AMO) when investigating the impact of HRM on employee performance. This model suggests that employee performance can be enhanced by practices improving ability, motivation, and opportunity to perform (Jiang, Lepak, Hu, & Baer, 2012). HRM research has shown that the use of practices intended to enhance employees' abilities, motivation, and opportunity to perform their work tasks is associated with a range of positive outcomes, like productivity, low turnover and performance (Jiang et al., 2012). As several empirical studies have used and validated the AMO conceptualisation (Jiang et al., 2012) the present study draws upon this framework. The first category of *ability-enhancing practices* will be used, specifically training and selection, as these are widely used practices that have been reported to amongst the top predictors of employee performance (Boselie et al., 2005).

In sum, the present study investigates the relationship between ability-enhancing practices and in-role employee performance in an effort to build on the understanding of the causal chain between HRM efforts and employee outcomes. Empirical research showing a relationship between ability-enhancing practices and employee performance will be presented below.

### **Ability-Enhancing Practices**

Ability-enhancing HRM practices include training/development and selection/recruitment practices (Jiang et al., 2012). The assumption is that selecting skilled employees, as well as developing the skills of those employees will secure competent workers. These will perform on a higher level than would be the case if fewer resources were aimed at ability-enhancement.

The literature contains several studies that have treated the ability-enhancing practices separately when testing their effects on performance. This section will present studies on the effects of *developmental* HRM practices. Jiang et al. (2012) argue that training and development provide employees with organisation-specific skills necessary to perform in their jobs. In their review, Boselie et al. (2005) found training to be among the most researched employee management activities. Several studies show effects of training and development on employee performance (Chang, 2006; Frayne & Geringer, 2000; Mathieu, Heffner, Goodwin, Salas, & Cannon-Bowers, 2000; Tremblay et al., 2010; Tessema & Soeters, 2006). For instance, Frayne and Geringer (2000) showed that self-management skill training significantly increased both objective and subjective measures of job performance. In their experimental design, 30 insurance salespeople received training, and performance subsequently improved over a 12-month post-training period, partially mediated by self-efficacy. In another experimental design, Mathieu et al. (2000) found that training intended to foster task- and team-based mental models significantly improved team processes and performance. This is in line with the notion that investing in employee development and providing training for employees to develop and gain new skills will lead them to perform effectively (Lee & Bruvold, 2003). Also, collecting data from civil servants in Eritrea, Tessema and Soeters (2006) examined whether HR practices affect performance at the employee level. They found that training, amongst other HR practices, positively related to change in employee performance, partially mediated by HRM outcomes.

Several researchers have argued for the role of social exchange theory (Blau, 1964) in explaining the HRM – employee performance link. Lee and Bruvold (2003) argue that investments in employee development could create a sense of obligation towards the organisation, thereby increasing motivation to work hard towards the organisations goals. Chang's (2006) finding that a positive relationship between commitment HR at the unit level, including formal training, and work effort reported by employees, support this notion. The commitment HR approach is rooted in social exchange theory (Chang, 2006). The study took a multi-level approach similar to the present study, examining the effects of HRM practices on the unit-level, and work effort as a self-report measure at the employee level. Chang (2006) argues that providing training communicates long-term commitment to the employee, and that “when an organization expresses its commitment to its workforce, the employees will, in return, reciprocate with their commitment to the organization, as reflected in enhanced organizational commitment”

(p. 371). This will in turn increase their work effort level (Chang, 2006). Similarly, Kuvaas (2008) argues that the effect of HRM practices on work performance is dependent on the employee-organisation relationship. He found that perceived organisational support (POS), affective commitment and procedural and interactional justice *moderated* the relationship between perception of developmental HRM practices and individual work performance. The reason for this, he argues, could be that POS will invoke norms of reciprocity, while lack thereof could lead employees to respond to training opportunities by focusing on their individual interest, like their own careers. The mediating variable of affective commitment bears resemblance to the currently hypothesised work engagement in that they both include the degree of involvement experienced by the employee. However, POS, organisational commitment and the justice dimensions are all concepts that relate to attitudes the employee has towards the *organisation*, while work engagement refers to attitudes towards the *work tasks* (e.g., Hakanen, Bakker, & Schaufeli, 2006). The ability-enhancing HRM practices are inducements intended to improve the employees' abilities for the *work tasks*, and the hypothesised relationship assumes that if people have these abilities they will be more engaged. Work engagement is therefore thought to *mediate*, rather than moderate the HRM – performance link. However, as ability-enhancing practices and work engagement, like POS, are thought to invoke norms of reciprocity, Kuvaas' argument for the role of social exchange is also relevant for the present discussion.

Interestingly, Tremblay et al. (2010) finds support for a relationship where POS, affective commitment and procedural justice are *mediators* between skills development and both in-role and extra-role behaviour. Also based on the social exchange perspective, they argue that “when the employer values employee contributions and demonstrates its commitment to them through discretionary actions such as putting in place favourable HRM practices, these actions may well be interpreted by the employees as tangible signs of support” (Tremblay et al., 2010, p. 421), and that this in turn enhances performance.

Apart from *developing* the abilities of their employees, organisations can make use of a number of recruitment tools for selecting able personnel. This section will present studies on the effects of *selection/recruitment* practices. Methods found to be successful in predicting work performance include general mental ability tests, structured employment interviews, work samples and integrity tests (Schmidt & Hunter, 1998). Huselid (1995), in his meta-study, found that recruitment practices enhanced employee competence, organisational productivity and

performance. One explanation for these selection practices' influence on performance can be found in expectancy theory. Here it is assumed that if employees are to be productive, they must experience competence, motivation and role clarity (MacDuffie, 1995). Selection methods that enable the selection of competent employees will thus facilitate employee performance. This link has been researched and received support in the following studies.

In addition to training, Tessema and Soeters (2006) tested the effects of recruitment and selection practices, and found them to be significantly related to higher levels of employee performance in Eritrean civil servants. Youndt, Snell, Dean, and Lepak (1996) also found increased employee productivity resulting from a number of staffing techniques. Furthermore, Sekiguchi (2004) argues that a high level of person – organisation fit and person – job fit will lead to positive outcomes like job satisfaction, organisational commitment and performance, and that selection procedures containing evaluations of these constructs will be beneficial.

Summing up, selection and development practices have been shown to positively influence performance. From these studies it is likely that HRM practices measured at the unit-level, including selection and development, will positively relate to employee performance. Social exchange mechanisms and norms of reciprocity, as well as the high levels of competence that can result from development and targeted selection procedures, could explain these effects. The first hypothesis is therefore as follows:

*Hypothesis 1: Ability-enhancing HRM practices at the unit level are positively related to performance at the employee level*

### **The Mediating role of Work engagement**

How, exactly, HRM practices influence employee performance has been the subject of investigations exploring different intermediate concepts, such as motivation, role clarity, organisational commitment and perceived organisational support (Chang, 2006; Tessema & Soeters, 2006; Tremblay et al., 2010). Recently, a line of inquiry has been initiated where *work engagement* is proposed as a mediator in the HRM – employee performance link (Karatepe, 2013). Karatepe investigates the effects of High Performance Work Practices, specifically employees' appraisals of training, empowerment, and rewards, in frontline hotel employees, and the mediating effect of their work engagement. Note that these practices differ from the HRM

practices of selection and development investigated in the present paper, which have a clearer emphasis on ability-enhancement. Work engagement is understood to be a motivational construct defined as a “positive, fulfilling, work-related state of mind that is characterized by vigour, dedication, and absorption” (Schaufeli et al., 2002, p. 74). Vigour is regarded as a physical component, which entails high levels of energy and mental resilience while working, the willingness to invest effort in one’s work, and persistence even in the face of difficulties. Dedication is an emotional component characterized by a sense of significance, enthusiasm, inspiration, pride, and challenge at work. Absorption is considered a cognitive component, which consists of being fully concentrated, happy, and deeply engrossed in one’s work, experiencing that time passes quickly, and difficulty detaching oneself from work (Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007).

Empirical studies have found work engagement to be related to several individual and organisational outcomes, such as job satisfaction, organisational commitment, absenteeism, turnover, organisational and employee performance (e.g., Combs, Lui, Hall, & Ketchen, 2006; Li, Sanders, & Frenkel., 2012; Schaufeli & Bakker, 2004; Salanova, Llorens, Cifre, Martinez, & Schaufeli, 2003). As previously stated, expectancy theory assumes that if an employee is to be *productive* they must experience motivation (MacDuffie, 1995). In this case, productivity corresponds to performance and motivational facets of work engagement have been established. Hence, the assumptions of the present study that work engagement will mediate the HRM – performance link fits well with this framework. In accordance with this, Salanova, Agut, and Peiro, (2005) argue that job resources are workplace facilitators, which have the potential to motivate and increase engagement. Furthermore, engaging in ones work by investing effort, being dedicated and highly concentrated have beneficial effects on performance (Salanova et al., 2005) This is in line with Becker, Huselid, Pinckus, and Spratt’s (1997) model, which suggests that HRM practices most proximally impact motivation, which consequently influence employees’ productivity. In this section, it will therefore be argued that work engagement plays a mediating role in the relationship between HRM practices and employee performance. First, research on the HRM – work engagement link will be presented.

Bakker and Demerouti (2008) advocated the need for organisations to prioritize resources for HRM practices in order to increase employees work engagement. Perhaps a positive effect occurs “because employees who have resources that facilitate their job tasks are more apt to

invest energy and personal resources in their work roles” (Christian, Garza, & Slaughter, 2011, p. 99). HRM practices have been shown to impact work engagement in several studies. Salanova et al. (2005) gathered data from service employees and customers when examining the relationship between organisational resources and work engagement and performance. Three categories of organisational resources were used, including organisational training. Their findings show that when employees perceive the availability of organisational resources (e.g., training) they feel more engaged. Bal, Kooij, and De Jong (2013) also established a significant link between training practices at the unit level and work engagement at the employee level. Furthermore, in a longitudinal study, Schaufeli, Bakker, and Van Rhenen (2009) investigated the effect of job resources, including training and development, on work engagement. They found that over time, when controlling for initial levels, work engagement increased when training resources increased. They argue that job resources foster engagement through a motivational process where fulfilment of autonomy- and competence needs create motivation for reaching ones goals. Kuvaas (2008) also argues that HRM inducements cause positive attitudes that improve work performance and motivation. From these studies, the following can be expected:

*Hypothesis 2: Ability-enhancing HRM practices at the unit level are positively related to work engagement*

Work engagement has also been argued to positively relate to employee performance. As explained in the words of Christian et al. (2011, p. 120): “because engaged employees experience a high level of connectivity with their work tasks, they strive toward task-related goals that are intertwined with their in-role definitions and scripts, leading to high levels of task performance”. Furthermore, several studies have indicated that work engagement has positive consequences at the individual and organisational levels. A meta-study by Harter et al. (2002) found substantial relationships between employee engagement and business outcomes like productivity, profit and turnover. Karatepe (2013) found engagement to have positive effects on hotel employees’ job performance and extra-role behaviour. He explains this by arguing that when engaged employees are more vigilant and concentrated on their tasks, they are more successful when dealing with customer requests and problems, which results in high quality performance. Furthermore, Bakker and Bal (2010) tested a model of job resources, engagement and performance amongst 54

teachers, and found that daily levels of work engagement, as reported in diaries, were predictive of classroom performance. Li, Sanders and Frenkel (2012) argued that engagement leads to high levels of energy, mental resilience and willingness to invest effort into challenging tasks, leading to higher job performance. Moreover, Salanova et al. (2005) linked engagement to performance, mediated by service climate, among hotel and restaurant employees. A more recent meta-study also supports these findings (Bakker & Demerouti, 2008). Work engagement was found relating to performance, explained by positive employees possessing drive for succeeding with tasks. Hence, a positive relationship between work engagement and employee performance is assumed.

*Hypothesis 3: Work engagement is positively related to employee performance*

Some studies have explored the mediating effects of work engagement, or similar constructs, in relationships between HRM practices and employee performance. Tessema and Soeters (2006) tested the effects of HRM practices on employee performance and the mediating effect of HR outcomes, including motivation and competence. With engagement being a motivational construct, their finding that HR outcomes mediated the relationship between training and recruitment could hold relevance for present discussion. The findings are also in line with Christian et al.'s (2011) quantitative review showing support for work engagement as a mediator in the relation between job resources (resulting from HRM practices) and job performance. Even more interesting are the findings of Karatepe (2013) who tested work engagement as a mediator of the effects of High Performance Work Practices on job performance and extra-role customer service. Collecting data from Romanian hotel employees, he found work engagement to fully mediate these relationships. Karatepe argued that work engagement plays a mediating role between High Performance Work Practices and performance outcomes in that beneficial HRM practices induce feelings of reciprocity, carried out through increased engagement, resulting in job performance. He proposes an explanation based on social exchange theory in which employees receiving economic and socioemotional resources from the organisation (e.g., training) feel obligated to reciprocate through work engagement and improved performance. While Karatepe (2013) examined the effect of *High Performance Work Practices* on employee performance, the present investigation measures the *ability-enhancing practices* of selection and development. As the author points out, the practices of training, empowerment and

rewards do not represent the entirety of High Performance Work Practices or HRM practices (Karatepe, 2013). While the present study does not investigate the entire AMO framework, the ability enhancing practices of selection and development represent a distinct selection of HRM practices that are commonly used and found strongly relating to performance (Boselie et al., 2005). Karatepe's (2013) study nonetheless provides empirical results that indicate work engagements as a mediator in the HRM – employee performance relationship, and it is assumed this will also be the case for ability-enhancing HRM practices.

In sum, the studies described in this section show support for HRM practices being related to motivational constructs like work engagement, and work engagement being related to organisational and individual outcomes, like employee performance. There are also findings indicating that engagement mediates the link between HRM and in-role and extra-role behaviour. From these studies it is likely that work engagement will mediate the relationship between ability-enhancing HRM practices and employee performance.

*Hypothesis 4: Work Engagement mediates the relationship ability-enhancing practices at the unit level and employee performance*

## **Method**

### **Sample and Procedure**

Data for this study was collected over a period of two years, by five master students writing their individual thesis on relating themes. Two online questionnaires were distributed in various organisations: one questionnaire intended for employees and one for HR-representatives or managers, each version estimated to take 15-20 minutes to complete. Small and large organisations from various sectors were contacted by phone or e-mail and asked to participate with a minimum of ten employees and one manager/HR-representative. In return they were offered a report summarising their results compared to other organisations.

After the initial contact the organisational representative received an e-mail informing about the purpose of the study, anonymity, confidentiality and their right to withdraw their participation at any time. Upon agreeing to participate, URL-links to the questionnaires were sent



out by the organisational representative, or the master students distributed the links directly. Reminders were sent after one or two weeks.

In total, 271 companies were contacted, and 52 agreed to participate, giving a response rate of 19%. In a few organisations, more than one leader filled out the questionnaire intended for the organisational representative. These cases were aggregated into one case. The final sample consisted of 52 managers/HR-representatives and 665 employees. Out of these employees, 52% were female ( $n=341$ ) and 48% male ( $n=324$ ), ranging in age from 17 to 65 with an average of 39 ( $SD=12$ ). Organisational tenure ranged from 0 to 39 years ( $M=6.15$ ,  $SD=7.20$ ). Both private and public sectors are represented, including public schools, knowledge intensive organisations, manufacturing companies, wholesale companies, retail, public transport, and other service related industries.

## Measures

**Ability-Enhancing HRM-Practices.** Developmental HRM practices were assessed at the unit level using a measure of Delery and Doty (1996). The organisational representative was asked to indicate the use of developmental inducements on a five-point Likert scale consisting of four items, for example, “Extensive training programs are provided for individuals in this organisation”. Selection practices were measured on a five-point Likert scale with three items (Wei, Han, & Hsu, 2010). A sample item from this scale is: “Our organisation makes extensive efforts to select the right person”. Developmental and selection practices were aggregated to cover the ability dimension of the AMO framework, reaching an internal consistency ( $\alpha$ ) of .80.

**Work Engagement.** The 17-item Utrecht Work Engagement Scale (UWES) of Schaufeli et al. (2002) was used to assess work engagement at the employee level. The measure enquires about three different conditions of work engagement, which is to be rated on a seven-point Likert scale. Past studies have found the three sub-dimensions of vigour, dedication and absorption to inter-correlate above .65 (Schaufeli et al., 2002; Schaufeli & Bakker, 2004), and these were therefore aggregated into one variable. Six items assessed vigour, for instance, “When I get up in the morning, I feel like going to work”. Dedication had five items, for example, “To me, my job is challenging”. Absorption was assessed by six items, for example, “When I’m working, I forget everything around me”. Internal consistency ( $\alpha$ ) for the work engagement scale with all 17 items was .96.

**Employee Performance.** Self-evaluation of employee performance was assessed using a 7-item scale of in-role performance developed by Williams and Anderson (1991). With a five-point Likert scale, employees rated questions such as “I adequately complete my assigned duties”. The Cronbach’s alpha ( $\alpha$ ) for these items were .77.

**Control Variables.** At the unit level, the analysis controlled for organisational size (number of employees), and at the employee level gender (male/female) and tenure (years employed in the organisation) were include as control variables.

### **Statistical Analysis**

In the present study, data on two levels were analysed: the organisational level and the employee level. Measures of employee performance represented the dependent variable, ability-enhancing HRM-practices were included as the independent variable, and work engagement as a mediator. The analysis was performed with SPSS 22. There were missing values for below 3% in the employee data. These were replaced using Expectation-Maximization (EM) method as suggested by Schafer and Graham (2002). This method calculates likely values for the missing data based on the variance of the existing data.

Before conducting the analyses, all predictors were centred to increase the interpretability of the intercept in the models (Hox, 2010). As suggested by Enders and Tofighi (2007), group mean centring was applied for level 1 variables, which was done by subtracting the group/organisation mean of each independent variable from the values of each independent variable, and grand mean centring was applied for level 2 variables by subtracting the overall mean of the independent variables from the values of each independent variable.

Multilevel analysis was chosen in order to test relationships at different levels, with employees (level 1) nested in companies (level 2). The independent variable, ability-enhancing HRM practices, was measured at level 2, while the dependent variable, employee performance, as well as the mediator, work engagement, were measured at level 1. Collecting data on several levels reduces the likelihood for common method bias in the sample (Podsakoff, MacKenzie, & Podsakoff, 2012), and multilevel analysis provides for a robust examination of cross-level models (Hox, 2010). It allows for the data to be analysed in clusters, avoiding the multiple regression assumption of independence. This reduces the chance for making a type 1 error.

The intercept only model was calculated first to determine the total unexplained variance in the model. This model does not contain any predictors. In the second model, the control

variables were included in order to examine their effects on the dependent variable. In the third and fourth model, the independent variables were included.

The mediation of work engagement between HRM practices and Employee Performance was tested using the Monte Carlo method (Selig & Preacher, 2008). This method has been shown to produce smaller errors in the confidence intervals compared to the Sobel test (Preacher & Selig, 2012).

## Results

Tables 1 and 2 present the descriptive statistics, means, correlations and alpha values of the predictors and outcome variables at the employee level and the predictor at the employer level. To avoid disaggregation of employer data and aggregation of employee data the descriptive statistics and correlations for the different levels are shown in two separate tables.

Table 1

*Means, Standard Deviations, Correlations and Reliabilities at Employee Level*

No.	Variables	Mean	SD	1	2	3	4
1	Tenure	6.15	7.20				
2	Gender	1.49	0.50	-.14			
3	Work Engagement	5.47	1.19	-.05	-.00	(.96)	
4	Employee Performance	4.42	.51	-.00	-.12**	.39**	(.77)

*N=665 for all variables. Scale reliabilities ( $\alpha$ ) are reported on the diagonal in parentheses.*

*\*  $p < .05$  and \*\*  $p < .01$ .*

Table 2

*Means, Standard Deviations, Correlations and Reliabilities at Organisational Level*

No.	Variables	Mean	SD	1	2
1	Size	915.67	3696.14		
2	Ability- Enhancing HRM	3.67	.71	-.15	(.80)

*N=52 for all variables. Scale reliabilities ( $\alpha$ ) are reported on the diagonal in parentheses.*

### **HRM Practices and Employee Performance**

The intercept-only model for predicting employee performance shows the unexplained variance between companies and employees (see model 1 in Table 3), and the ICC measure indicated that 4% of the unexplained variance in the null model could be found at the group level. Although no significant effect of unexplained variance between groups was found, multilevel modelling was used due to the nesting of data. If regression analysis had been used the employer data would have been disaggregated.

Model 2 included the control variables gender, tenure and firm size. There was a small significant effect of gender, but the model failed to explain variance.

In Model 3 the predictor on level 2 was included to measure the effect of ability-enhancing HRM practices on employee performance. Hypothesis 1 predicted that ability-enhancing HRM practices at the unit level would be positively related to performance at the employee level. No significant effect was found, and there was no reduction in the AIC compared to Model 2. The model failed to explain variance on the group level, and hypothesis 1 is not supported.

### **HRM Practices and Work Engagement**

Hypothesis 2 predicted that ability-enhancing HRM practices at the unit level are positively related to work engagement. The intercept-only model for predicting work engagement (see Table 4, model 1) indicated that 6% of the unexplained variance in the null model could be found at the group level. The relationship between HRM-practices and work engagement is shown in Table 4 Model 3. The model explains 11% of the variation at level 2. The relationship is only significant at the 10% level, and there is a slight reduction in the AIC compared to model 2, but not compared to the empty model. Hypothesis 2 is thus supported.

### Work Engagement and Employee Performance

Hypothesis 3 predicted that work engagement is positively related to employee performance. This relationship is found to be significant, see Table 3 Model 4. The AIC also decreases, which indicates a better fit of the model. Model 4 explains 16% of the variance at level 1 compared to model 1.

Table 3

#### *Results of Multilevel Analysis Predicting Employee Performance*

Parameter	Model 1	Model 2	Model 3	Model 4
Fixed effects	Est. (SE)	Est. (SE)	Est. (SE)	Est. (SE)
Intercept	4.45 (.03)***	4.50 (.03)***	4.50 (.03)***	4.51 (.03) ***
Gender		-.11 (.04)**	-.11 (.04)**	-.12 (.04) **
Tenure		-.00 (.00)	-.00 (.00)	.00 (.00)
Size		.00 (.00)	.00 (.00)	.00 (.00)
Ability			.03 (.04)	.03 (.04)
Engagement				.16 (.02) ***
Random effects				
Unexplained variance Level 1	.25 (.01)***	.25 (.01) ***	.25 (.01)***	.22 (.01)***
Unexplained variance Level 2	.01 (.01)	.01 (.00)	.01 (.00)	.01 (.00)
AIC	988	984	986	812

*AIC = Akaike's Information Criterion.*

\* $p < .10$ . \*\*  $p < .05$ . \*\*\*  $p < .001$ .

### Work Engagement as a Mediator Between HRM Practices and Employee Performance

Hypothesis 4 predicted that Work Engagement mediates the relationship between ability-enhancing practices at the unit level and employee performance. Testing for the indirect effect of HRM practices via work engagement to employee performance was done with the Monte Carlo

bootstrap web-tool (Selig & Preacher, 2008). Results are significant when the confidence intervals do not contain zero. At the 5% significance level the confidence interval ranged from -.00079 to .07044. At the 10% significance level the confidence interval ranged from .00472 to .06400. Therefore, even though the relationship was not found to be significant at the 5% level, significance at the 10% level indicates some support for work engagement as a mediator in the relationship between ability-enhancing HRM practices and employee performance.

Table 4

*Results of Multilevel Analysis Predicting Work Engagement.*

Parameter	Model 1	Model 2	Model 3
Fixed effects	Est. (SE)	Est. (SE)	Est. (SE)
Intercept	5.54 (.07)***	5.54 (.08)***	5.55 (.08)***
Gender		-.04 (.09)	.05 (.09)
Tenure		-.01 (.01)	-.01 (.01)
Size		.00 (.00)	.00 (.00)
Ability			.21 (.11)*
Random effects			
Unexplained variance	1.34 (.08)***	1.33 (.08)***	1.33 (.07)***
Level 1			
Unexplained variance	.09 (.05)*	.09 (.05)*	.08 (.04)*
Level 2			
AIC	2111	2113	2111

*AIC = Akaike's Information Criterion.*

\* $p < .10$ . \*\*  $p < .05$ . \*\*\*  $p < .001$ .

## Discussion

This study tested the mediating role of work engagement in the relationship between ability-enhancing HRM practices and employee performance. Two sources of data were used: employees and organisational representatives from a diverse sample of organisations. Previous studies have found positive relationships between ability-enhancing HRM practices and both

work engagement (e.g., Bal et al., 2013) and performance (Frayne & Geringer, 2000; Mathieu et al., 2000; Tessema & Soeters, 2006; Tremblay et al., 2010; Youndt et al., 1996). The present study also found a significant relationship between ability-enhancing HRM and work engagement. However, ability-enhancing HRM practices were not significantly related to employee performance.

Previous research has proposed work engagement as a mediator between HRM practices and employee outcomes (e.g., Christian et al., 2011), and Karatepe (2013) found support for this when testing a relationship that included employee in-role and extra-role performance as outcomes. In accordance with these findings, the main hypothesis of work engagement mediating the relationship between ability-enhancing HRM practices and work engagement received some support. The present results thus indicate ability-enhancing HRM practices as contributing to increased performance through employees' absorption, vigour and dedication.

This paper contributes to research investigating the causal chain between HRM and, ultimately, organisational performance. The way in which HRM practices operate on employee performance, and how this in turn contributes to enhanced organisational performance is part of the yet to be discovered contents of the 'black box' (Boselie et al., 2005). By providing results that indicate the role of work engagement in this relationship this paper responds to a research call for a clarification of intermediate variables in the HRM – organisational performance link (Boselie et al., 2005; Gardner et al., 2001)

Likewise, the existing research in the field has been criticised for choosing outcome variables distal from the predictors, like *organisational* performance (e.g., Gardner et al., 2001). An investigation of more proximal employee outcomes of HRM has been warranted (Boselie et al., 2005; Gardner et al., 2001) and the finding of the present paper contributes by giving insight to the HRM – *employee* performance link. HRM research has also been criticised for using poorly defined frameworks, resulting in a lack of clarity regarding what practices make up strategic HRM (Boselie et al., 2005). An increasing amount of research has drawn upon the AMO framework (Bal et al., 2013), and this study continues with this line of research. The investigation of ability-enhancing practices and specifically training and selection is especially relevant, as these have been listed in the top six predictors of performance (Boselie et al., 2005). The nonsignificant results of the direct relationship between ability-enhancing practices and employee performance thus serve to nuance these assertions.

The following section will discuss the results for each hypothesis separately, starting with those that were supported by the analysis. The main hypothesis, hypothesis 4, predicted that work engagement would mediate the relationship between ability-enhancing HRM practices and employee performance. Few studies have investigated this relationship. Only one study could be located which tested such a model (i.e. Karatepe, 2013). Considering that there has been far more interest in the engagement – performance relationship, and that HRM practices are commonly utilized to facilitate performance in organisations, it is noteworthy that there haven't been more investigations on how HRM practices, work engagement and performance relate to each other. The present investigation thus meets the need to clarify how HRM practices impact employee performance *through* work engagement, beyond the existing single level, cross-sectional empirical research into a limited selection of HRM practices (e.g., Karatepe, 2013).

Although few studies have included work engagement as a mediator between HRM practices and employee performance, the existing and similar research indicates the plausibility of this relationship (Christian et al., 2011; Karatepe, 2013; Tessema & Soeters, 2006). Particularly relevant is Karapete's (2013) study, which investigated High Performance Work Practices effect on employee performance through work engagement. However, where Karatepe (2013) researched performance in a customer service profession, the present study uses data from a broad range of private and public organisations. Also, the investigation of the ability-enhancing practices of selection and development differs from Karatepe's exploration of High Performance Work Practices. It is therefore interesting that the present study, like the ones mentioned (Christian et al., 2011; Karatepe, 2013; Tessema & Soeters, 2006) also find support for a mediating effect of work engagement in the relationship between HRM practices and employee performance. It seems that when organisations utilize training and selection practices, this in turn impacts employees' performance, through work engagement. Social exchange theory (Blau, 1964) might be helpful in explaining this. Employees experiencing the organisation as investing in them by taking efforts to ensure they are right for the job, as well as providing training, might reciprocate by increasing their engagement, which is resulting in better performance.

To further explore the mechanisms of the hypothesised mediation relationship one could also look to expectancy theory. Expectancy theory states that *competence*, *motivation* and *role clarity* must be in place in order for employees to be productive, that is perform (MacDuffie, 1995). This could explain the finding that increases in work engagement following ability-



enhancing HRM contributes to productive behaviour and performance, in several ways: (1) training and selecting the right people might be enhancing *motivation* by eliciting norms of reciprocity; (2) training might enhance *competence*; and (3) being selected for specific positions through careful procedures could be contributing *to role clarity*.

Moving on from the main hypothesis, the role of expectancy theory is also interesting in the second hypothesised relationship. Hypothesis 2 predicted that ability-enhancing HRM practices would be positively related to work engagement. With work engagement being a motivational construct, the significant results found for this relationship is in line with the first proposed explanation, that training and selecting the right people might be enhancing *motivation* by eliciting norms of reciprocity. Employees experiencing the organisation as investing time and effort in selecting them, as well as providing training, could be responding with increased motivation and sense of work engagement. The significant results of ability-enhancing HRM – work engagement link is also in line with other studies finding that job resources increase work engagement (e.g., Bakker et al., 2007; Hakanen, Perhoniemi, & Toppinen-Tanner, 2008; Salanova et al., 2005). Schaufeli et al. (2009) argue that job resources foster engagement through a motivational process that satisfies the needs for autonomy and competence to reach one's goals. Employees who experience having sufficient resources for them to do their jobs are more likely to invest energy in their work (Christian et al., 2011). In the context of the present investigation, training and selection practices can be viewed as corresponding to job resources such as *opportunity to learn and develop* (Schaufeli et al., 2009). Also, if the employee is selected based on competence, this could buffer against burnout and facilitate work engagement. The literature has shown job resources to have positive effects on work engagement, as well as stress reactions when resources are low (Hakanen et al., 2006).

In the third hypothesis, work engagement was assumed to increase employee performance. The analysis showed that employees experiencing vigour, dedication and absorption at work do indeed perform at a higher level. Support for this relationship has been found in several previous studies (e.g., Bakker & Bal, 2010; Li et al., 2012; Salanova et al., 2005). It appears engaged workers invest extra effort towards challenging tasks (Li et al., 2012), strive towards task-related goals (Christian et al., 2011), are concentrated on their tasks (Karatepe, 2013) and possess drive for succeeding with their tasks (Bakker & Demerouti, 2008)

in a way that enhances their performance. The willingness to go that extra mile is thus resulting in performance increases, a notion supported by the significant results for this relationship.

While support was found for hypothesis 2 to 4, the results showed no support for the first hypothesised relationship. Hypothesis 1 predicted a positive relationship between ability-enhancing HRM practices and employee performance. It was argued that training and selection, practices that are intended to increase employees' abilities, would be directly linked to performance. The assumptions made initially were based on the finding of a number of studies reporting significant results for this relationship (Chang, 2006; Frayne & Geringer, 2000; Mathieu et al., 2000; Tessema & Soeters, 2006; Tremblay et al., 2010). Somewhat surprisingly, the present analysis did not find this relationship to be significant. There are several possible explanations for this, and the next section will discuss some of these.

The prediction that ability-enhancing HRM practices increase employee performance rests upon the assumption that these practices enhance ability and competence. Competence is thought to contribute to performance by enabling people to solve their work tasks. As argued previously, expectancy theory could explain a relationship where HRM practices enhance performance by fostering motivation, role clarity and competence (MacDuffie, 1995). However, the lack of a significant direct link between ability-enhancing HRM practices and employee performance gives reason to question the competence-enhancing element of training and selection practices. There are other possible reasons for why employers provide training for their employees, like competitiveness and offering personal development (Hallier & Butts, 1999), and this might be visible in the distribution of training amongst employees. If training was solely used to enhance competence one might expect unskilled workers to receive the most training, but on the contrary, it appears that there is a positive relationship between the skill level of employees and their access to training (Whitfield, 2000). Perhaps then, training is also being used as a reward by the organisation, and as a means to increase employability for the employee, and not just for competence-enhancing purposes.

Another reason for the lack of significant results in the ability-enhancing HRM – Employee performance link could be the (in)effectiveness of the training itself. Concerns regarding the effect of training have yielded studies investigating the predictors of training effectiveness and the predictors of increased work performance (Blume, Ford, Baldwin, & Huang, 2010). In their meta-analysis, Blume et al. (2010) summarised findings of empirical

studies, showing that training effectiveness depends on a range of variables. Training objectives, work environment, cognitive ability and trainee motivation were among the predictors. As the present analysis did not include these variables, it is possible that either of these factors influenced the nonsignificant results. Moreover, a lack of training effectiveness could also raise a need to question the assumption that ability-enhancing HRM practices invoke norms of reciprocity, as could be predicted by social exchange theory (Chang, 2006). If the training is ineffective, it might not be perceived by the employees as beneficial or relevant and thus not as a valuable investment that should be reciprocated. For instance, trained skills will not be seen as job-related if trained employees do not have the opportunity to perform them (Ford, Quinones, Sego, & Speer Sorra, 1992), and training might then not create an incentive to repay.

As for selection procedures, employee reactions to the selection methods, like perceived unfairness, have not been considered in the analysis, and unfavourable reactions cannot be ruled out. While the assumption is that the organisation is seen as investing in the employee by making sure he or she is a good fit for the job, an alternative could be that stressful selection procedures are seen as having low predictive validity, leading to a view of organisation as being unfair (Smither, Reilly, Millsap, Pearlman, & Stoffey, 1993). The latter would then not lead to employees feeling the need to repay by higher levels of performance.

On the other hand, the wish to reciprocate when receiving ability-enhancing HRM practices could still be present even if the practices are not enhancing relevant skills. An alternative explanation is therefore one where ability-enhancing practices *are* encouraging a social exchange response, without this actually leading to increased performance. If it is improving the individual's employability, training could be seen as a reward even if the skills taught are not relevant for the job. In this case, a willingness to repay the organisation with enhanced performance could occur, but without having improved relevant skills this willingness does not translate into actual performance.

### **Limitations and Suggestions for Future Research**

The results of this study must be considered in light of its methodological limitations. Although collecting data on two levels, some of the hypothesised relationships are measured at the same, employee, level. Hypothesis 3 suggested a link between work engagement and employee performance, which were both measured by employee self-report. This might reduce the statistical power and validity due to common method bias (Podsakoff et al., 2012). Future

research should therefore consider using additional measures for the performance scale, for instance by including performance evaluation by the employees' supervisors or peers.

Despite this concern, the overall analysis provides a sound reduction of the likelihood of common method bias. The main hypothesis of work engagement mediating the relationship between ability-enhancing HRM practices and employee performance draws strength from being tested on both the employee and organisational level. A limitation of this relationship, as well as for the first hypothesis predicting a direct effect of ability-enhancing HRM practices on employee performance, is the small variance detected in the performance variable. This might be a reason why the first hypothesis was not found to be significant. However, using data on several levels might play a part in explaining why these results differed from those of previous research that have gathered data on one level (e.g., Tessema & Soeters, 2006; Tremblay et al., 2010). The use of single level data increases common method bias and could lead to type II errors (Podsakoff et al., 2012), and the use of multilevel analysis in this study has reduced the likelihood of such an error. The use of multilevel analysis could also explain the low correlations between some of the variables in this study. Future research should therefore make efforts to investigate the HRM – employee performance link on several levels.

As for the main hypothesis, this was not found significant at the 5% level. Not finding significance at the 5% level, and out of curiosity, an additional analysis was performed testing an alternative hypothesis of a moderating effect of work engagement in the HRM – employee performance relationship. The model tested in the additional analysis was similar to the one tested by Kuvaas (2008) where affective commitment, POS and organisational justice were found to moderate the relationship between developmental HRM practices and employee performance. However, no significant effect was found when testing for this type of relationship. Not finding significance at the 5% level might then be due to the small amount of variation in the performance variable. Most employees in the data set perceived themselves as performing at a fairly high level, and this reduces the variance that can be explained through predictors. The suggestion made earlier, of including a second measurement of employee performance, could perhaps also serve to increase the variance of this variable, thereby enhancing the statistical power.

### **Implications for Practice**

The focus on ability-enhancing practices, specifically training and selection is an important one in a Norwegian context, as these HRM practices seem to be used to a large extent. Investing resources into these practices should be grounded in well-documented effects, and the failure to find a direct link between ability-enhancing HRM and employee performance is thus interesting. The indication of a more complex relationship in which engagement plays a mediating role in this relationship might have implications for practice. Organisations might benefit from questioning what motives they have for investing in ability-enhancing practices. If the aim is to increase competence and employee performance directly, selection practices and training could be of less use than generally assumed. These practices do, however, seem to impact work engagement, and indirectly employee performance. This could mean that ability-enhancing practices are more effective if aimed at facilitating work engagement, and this has implications for practitioners designing and executing selection and training in organisations.

Furthermore, the failure to find a direct link between ability-enhancing HRM practices and employee performance indicates a need to evaluate the effectiveness of training and selection procedures. As argued, competence is not necessarily secured by companies investing in these efforts. If the skills being taught or selected are not transmissible to the work tasks, they might not increase employee performance. Evaluating the content and procedures of training and selection practices might therefore be beneficial for organisations, and in consequence increase the quality of selection and training.

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